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(54) Dispersant-viscosity improvers for lubricating oil compositions

(57) A polyacrylate ester, and more particularly a polymethacrylate ester based dispersant-viscosity improver for lubricating oil compositions. Specifically, the dispersant viscosity improvers of this invention are nitrogen-containing copolymers comprising units derived from

(A) from about 5 % to about 75 % by weight of alkyl acrylate ester monomers containing from 1 to 11 carbon atoms in the alkyl group;

(B) from about 25 % to about 95 % by weight of alkyl acrylate ester monomers containing from 12 to about 24 carbon atoms in the alkyl group; and

(C) From about 0.1 % to about 20% by weight of at least one nitrogen containing monomer selected from the group consisting of vinyl substituted nitrogen heterocyclic monomers, N,N-dialkylaminoalkyl acrylate monomers, N,N-dialkylaminoalkyl acrylamide monomers and tertiary-alkyl acrylamides, provided that the total equals 100%. Processes for preparing the compositions, additive concentrates and lubricating oil compositions are described.

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EUROPEAN SEARCH REPORT

Application Number

EP 96 30 4533

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	EP-A-0 436 872 (RÖHM GMBH) * page 4, line 22 - line 30 * * page 5, line 47 - line 57 * * page 6, line 19 - line 44 * ---	1,4,6, 17,21,22	C10M149/04 C10M149/06 C10M149/10 C08F220/18 C08F265/04 C08F265/06
X	DE-A-17 94 257 (SANYO CHEMICAL INDUSTRIES) * page 13; example 13 * * page 8, last paragraph * * page 9, paragraph 1 * ---	1,2,4,6, 7,9,16, 17,21-23	/(C10M149/04, 145:14), (C10M149/06, 145:14), (C10M149/10, 145:14), C10N30:02, C10N30:04
X	EP-A-0 439 254 (ROHM AND HAAS COMPANY) * page 4; example 3 * * page 3, line 9 - line 55 * ---	1,4,6,7, 15-23	
X	EP-A-0 393 899 (ROHM AND HAAS COMPANY) * page 5, line 29 - line 36 * * page 10, line 19 - line 22 * ---	1-4,6,8, 9,13,16	TECHNICAL FIELDS SEARCHED (Int.Cl.6)
X	GB-A-1 068 283 (ROHM & HAAS) * page 3; example 1 * ---	1,4,6,8, 16,17, 21,22	C10M C08F
X	US-A-3 506 574 (R.L. STAMBAUGH) * column 13; example 13 * ---	1-4,6,8, 9,13,16, 17,21-23	
X	US-A-4 281 081 (HEINZ JOST) * claims 1,2 * ---	1,4,6,8, 10-14, 16,17, 21,22,24	
The present search report has been drawn up for all claims.			
Place of search		Date of completion of the search	Examiner
THE HAGUE		9 December 1996	Hilgenga, K
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

EP 0 750 031 A3 (PCT/CH)



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EUROPEAN SEARCH REPORT

Application Number
EP 96 30 4533

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	US-A-3 732 334 (ERNST KOCH) * column 5; example 4 *	1,2,4-6, 8,9,13, 16,17, 21-23	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 9 December 1996	Examiner Hilgenga, K
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